



Enhancing Objective Assessment in the Inpatient Rehabilitation Program

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DISCLOSURES

Financial Disclosures:

Charlotte King (staff SLP) and Kelly Jo Booker (Speech Department Supervisor) are both employees of Siskin Hospital for Physical Rehabilitation and receive salaries for their positions.

Kelly Jo Booker also works in an acute care setting as a PRN SLP at Erlanger Hospital.



BACKGROUND

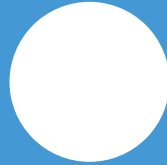
- Siskin Hospital for Physical Rehabilitation is the largest rehabilitation hospital in Tennessee.
 - 92 bed inpatient rehabilitation facility
- Across the continuum we have 6 SLPs working full time in our inpatient programs, and 4 outpatient therapy positions, and 6 PRN SLPs
- We typically serve ~55% of the patient population in the hospital.
 - We have a dedicated stroke and brain injury programs.

IMPORTANT DEFINITIONS



IMPLEMENTATION SCIENCE

“The ‘application and integration of research evidence in to practice and policy’” (Glasgow, Eckstein, & ElZarrad, 2013)



KNOWLEDGE TRANSLATION

“The *exchange, synthesis, and ethically sound application* of researcher findings with a complex system of relationships among researchers and knowledge users” (Khalil, 2016)



CLINICAL PRACTICE RESEARCH

“Addresses prevention, intervention, and assessment methods used in practice, as well as the implementation of those methods.” (Utianski, Spencer, & Wallace, 2022)

PROJECT RATIONALE



OBJECTIVITY

Increase the objectivity of inpatient evaluation by incorporating objective measures.



SUPPORT CLINICAL DECISIONS

Provide clear rationale for identifying patients who require therapy.



TRACK RECOVERY

Evaluate the changes made throughout therapy, measure and track change in next level of care.

PROJECT RATIONALE



PRACTICE-BASED
EVIDENCE

Inform future studies about implementation of treatment or how early identification of impairment can effect outcomes.



CONNECT WITH
PATIENT
OUTCOMES

Future studies may connect treatment of impairment with outcomes including discharge placement, need for therapy, or patient goal achievement.



IMPROVE PATIENT
EXPERIENCE

Support patient outcomes and provide objective data about change during their inpatient care.

QUALITY IMPLEMENTATION FRAMEWORK (QIF) (Meyers & Durlak, 2012)

01

**INITIAL CONSIDERATIONS
REGARDING THE HOST
SETTING**

02

**CREATING A STRUCTURE
FOR IMPLEMENTATION**

03

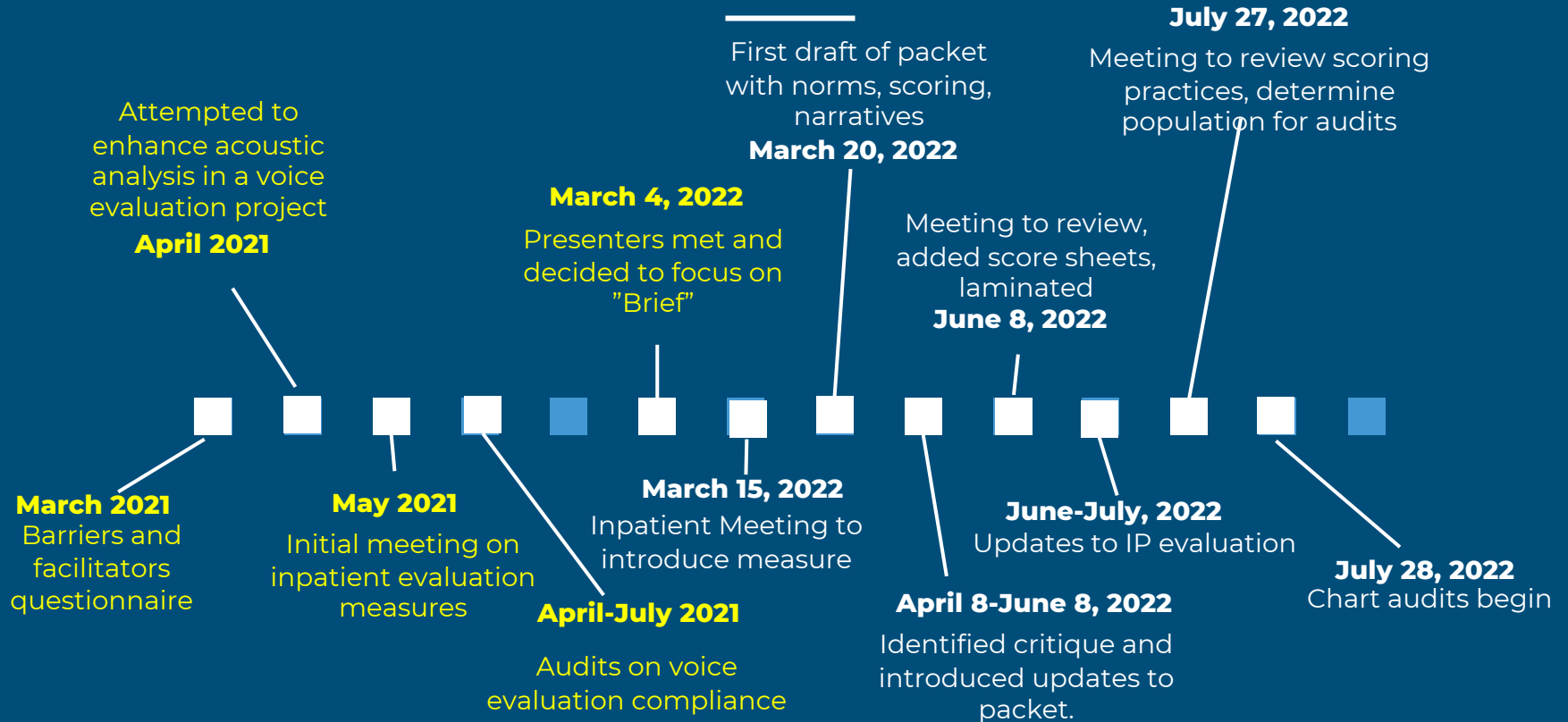
**ONGOING STRUCTURE
ONCE IMPLEMENTATION
BEGINS**

04

**IMPROVING FUTURE
APPLICATIONS**



QIF Phase 1: IMPLEMENTATION TIMELINE





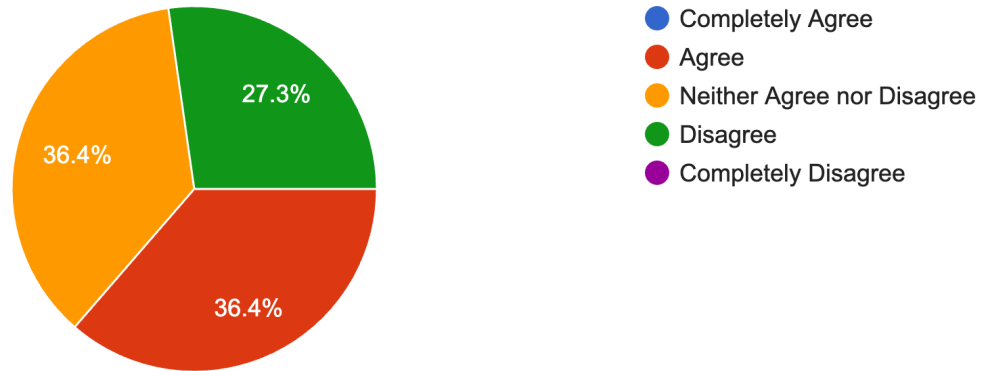
REFLECTION ON QIF Phase 1: Assessment

- “Facilitators and Barriers” (Swinkels et al., 2011) questionnaire about implementing objective data measurement into clinical practice.
- 11 respondents in our SLP Department of 15
- Used a Likert scale and included places to anonymously provide open-ended responses.

REFLECTION ON QIF Phase 1: Assessment

Our professional body overloads me with too many guidelines and rules.

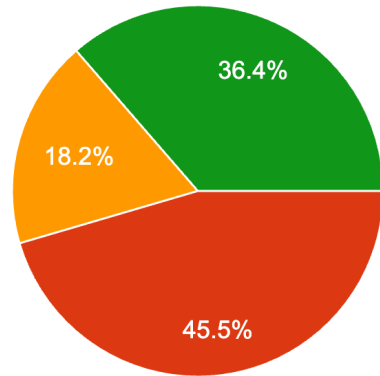
11 responses



REFLECTION ON QIF Phase 1: Assessment

There are so many different questionnaires, I do not know which one to use.

11 responses

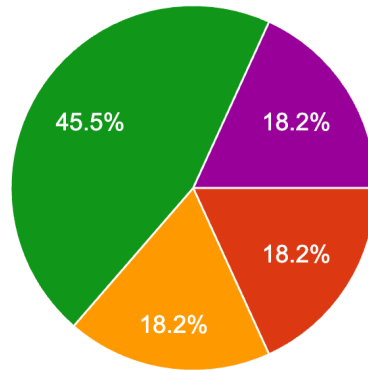


- Completely Agree
- Agree
- Neither Agree nor Disagree
- Disagree
- Completely Disagree

REFLECTION ON QIF Phase 1: Assessment

The kinds of patients I treat are unsuitable for the use of measurement instruments.

11 responses

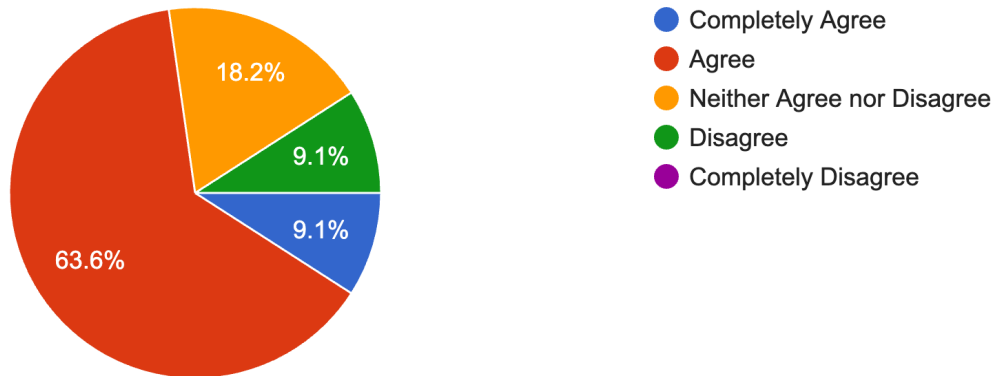


- Completely Agree
- Agree
- Neither Agree nor Disagree
- Disagree
- Completely Disagree

REFLECTION ON QIF Phase 1: Assessment

Patients want to evaluate treatment results objectively.

11 responses





REFLECTION ON QIF Phase 1: Assessment

Open-ended responses:

“I would like to have more freedom to NOT use measurements in rare cases where it seems too time consuming or redundant.”

“I will say that there are SO many guidelines and measures out there it is easy to feel underwater and almost frozen sometimes that I fall back on the old stand-bys even though I do want to branch out and be more individualized and flexible with the items I choose. “



REFLECTION ON QIF Phase 1: Assessment

Open-ended responses:

Are there reasons other than the above statements that are barriers for you to use the measurement instruments?

- “**Time** to score some tests can be an issue. “
- “We are lacking in knowledge/experience and the actual instruments”
- “Having to complete multiple standardized assessments when addressing multiple deficits. Using one or two is helpful but having to use one for each specific deficits can be frustrating and **time** consuming.”



REFLECTION ON QIF Phase 1: Assessment

Open-ended responses:

What areas and/or diagnoses you treat in your clinical practice would you like to use more measurement instruments?

(Noting the largest areas of need)

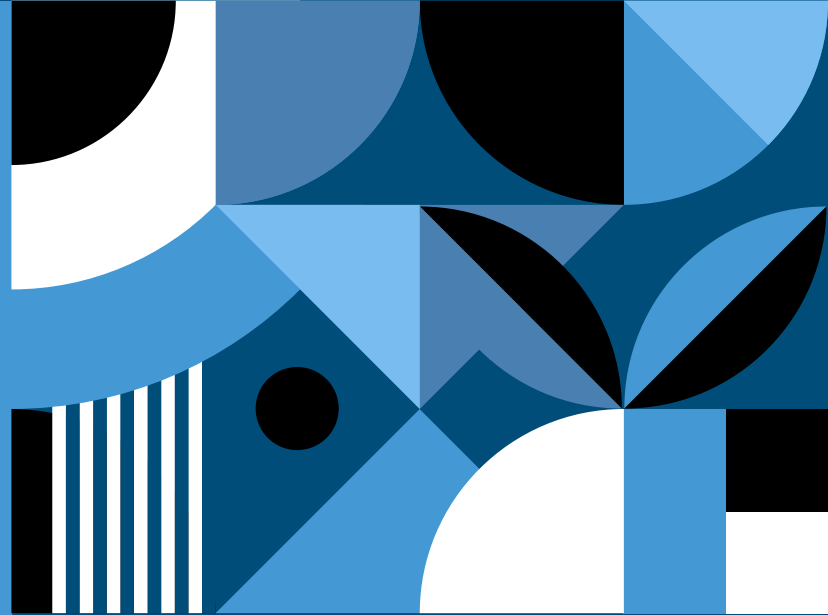
- 5 respondents noted “Voice”
- 3 respondents noted “Cognition”
- 3 respondents noted “Swallowing/Dysphagia”
- Other categories consisted of 1-2 respondents

QIF Phase 1: Assessment, Next Steps

Voice Project

In Summary:

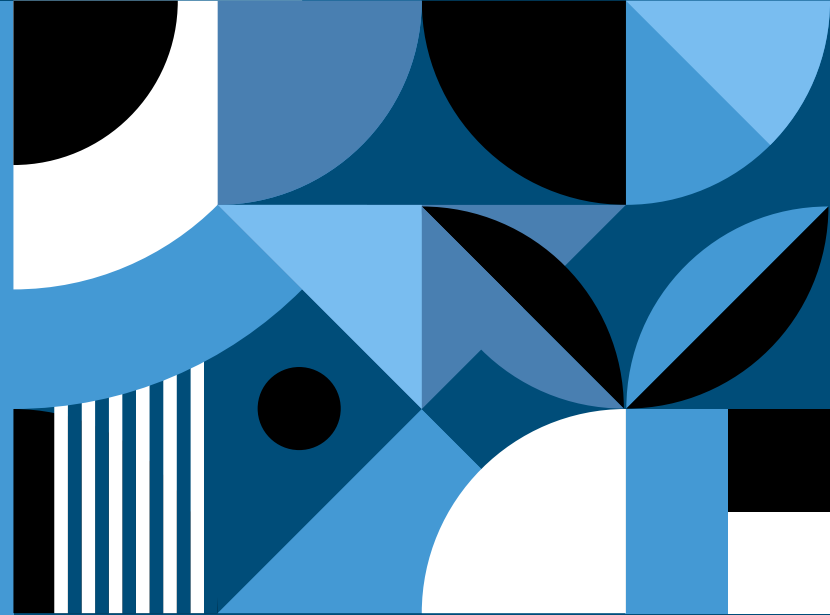
- Created a voice evaluation packet to increase use of acoustic measurements
- We led education meetings on use of packet, and acoustic measurement tool Praat
- Based on feedback, made a treatment matrix about voice treatments based on acoustic analysis results



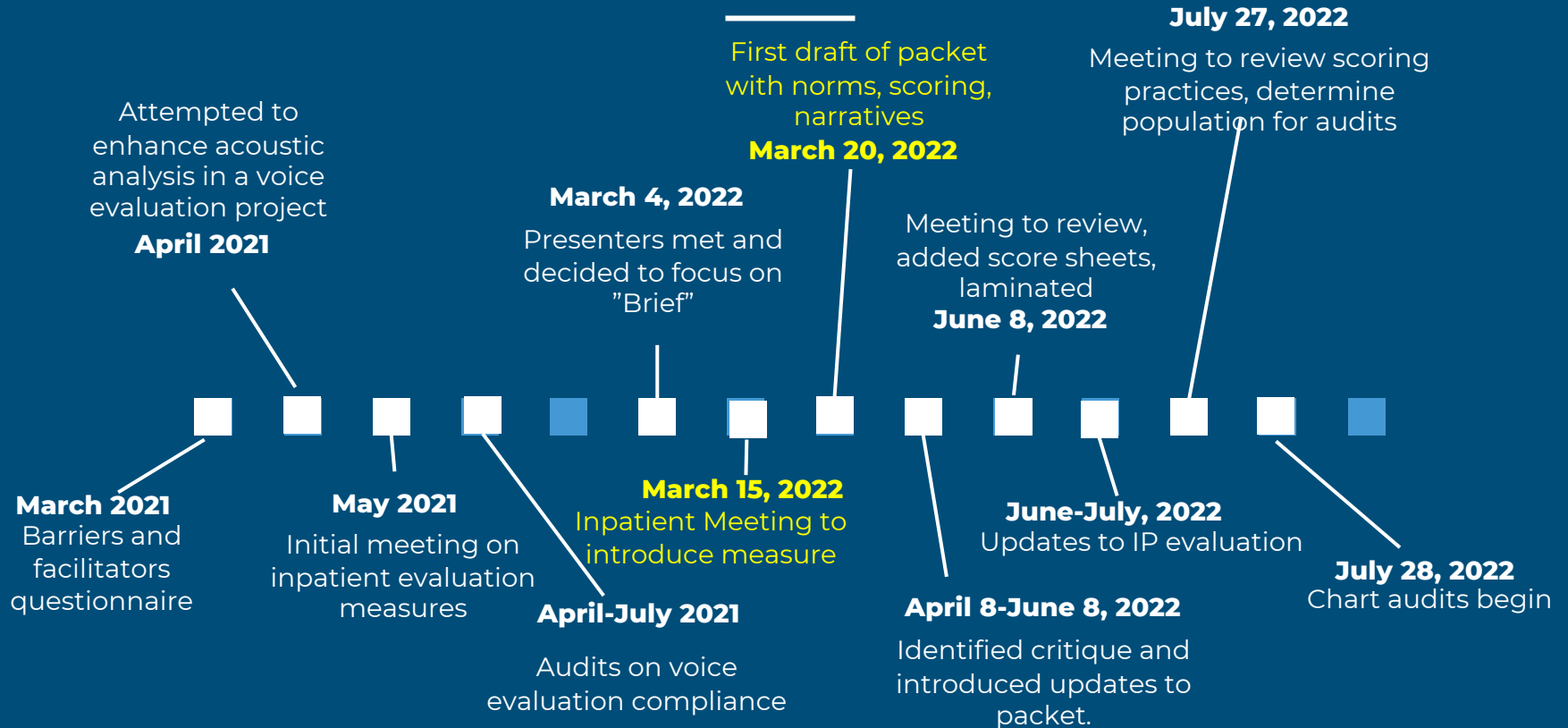
QIF Phase 1: Reflections on adaptation and capacity-building strategies

Voice Project

- In retrospect, this did not take into account some of the responses related to time/understanding the assessment process.
- SLPs were not as much a part of tool selection



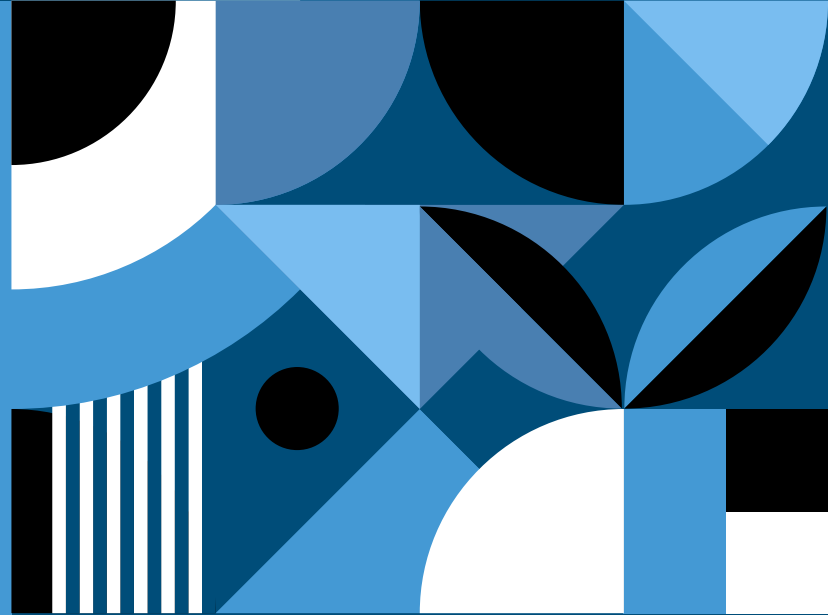
QIF Phase 2: IMPLEMENTATION TIMELINE



QIF Phase 1: Brief Project

“Brief” Project

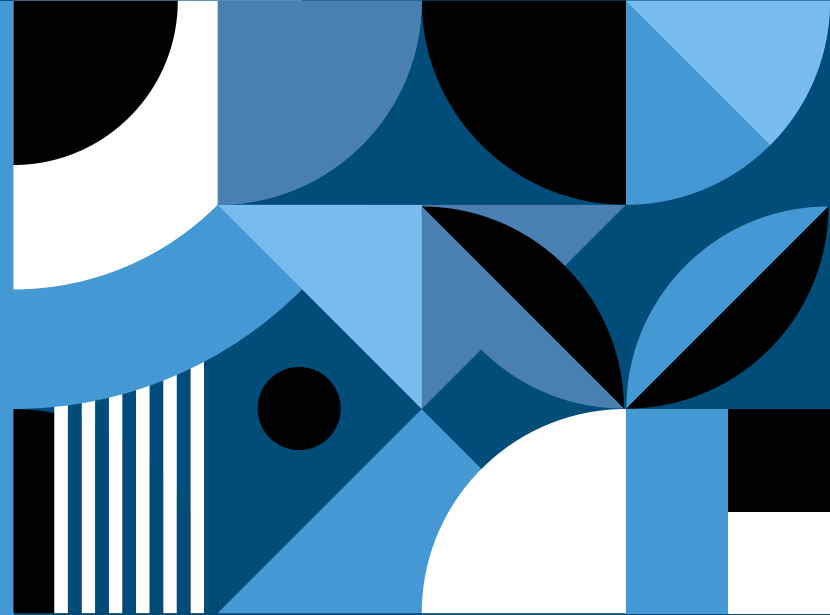
- Returning to the original goal, the presenters met together to identify a cognitive evaluation tool that might increase objectivity in inpatient assessment.
- Narrowed down to 5-minute cognitive evaluation or “Brief Evaluation of Executive Dysfunction”.
- Met with inpatient team to discuss the decision-making process, and learn about their perspectives and barriers to using new tool.



Brief Evaluation of Executive Dysfunction

Short --“brief”-- valid and reliable instruments

- Royall’s CLOX (Clock Drawing)
- Controlled Oral Word Association Test
- Trail Making Test, oral version



Filling in the Gaps with Normative Data

- Kennedy, G. J., & Cadet, S. F. (2018). Brief evaluation of executive dysfunction: An essential refinement in the assessment of cognitive impairment. *Best Practices in Nursing Care for Older Adults with Dementia, Alzheimer's Association*
- Mrazik, M., Millis, S., Drane, D. L. (2010). The oral trail making test: Effects of age and concurrent validity. *Archives of Clinical Neuropsychology, 25*(2), 236-243.
- Royall, D. R., Cordes, J. A., & Polk, M. (1998). CLOX: An executive clock drawing. *Journal of Neurology, Neurosurgery, and Psychiatry, 64*, 588-594.
- Tombaugh, T. N., Kozak, J., & Rees, L. (1999). Normative data stratified by age for two measures of verbal fluency: FAS and animal naming. *Archives of Clinical Neuropsychology, 14*(2), 167-177.

FAS Task

	Age 16-59 Years			Age 60-79 Years			Age 80-95 Years		
	Education (Years)			Education (Years)			Education (Years)		
	0-8 (n = 12)	9-12 (n = 268)	13-21 (n = 242)	0-8 (n = 76)	9-12 (n = 292)	13-21 (n = 185)	0-8 (n = 75)	9-12 (n = 102)	13-21 (n = 46)
M	38.5	40.5	44.7	25.3	35.6	42.0	22.4	29.8	37.0
(SD)	(12.0)	(10.7)	(11.2)	(11.1)	(12.5)	(12.1)	(8.2)	(11.4)	(11.2)

Oral Trail Making Test – B

Age groups (years) (midpoint)	20-39 (29)	29-49 (39)	39-59 (49)	49-69 (59)	59-79 (69)	69-90 (79)
Age	28.8 (5.7)	38.3 (6.6)	48.2 (5.8)	59.2 (6.7)	69.3 (5.6)	76.3 (6.11)
OTMT-B	27.77 (14.80)	29.97 (15.19)	30.65 (14.18)	35.27 (16.24)	42.25 (19.16)	46.78 (20.55)
OTMT-B err	0.42 (0.62)	0.52 (0.85)	0.61 (0.92)	0.00 (0.75)	0.51 (0.73)	0.67 (0.69)

QIF Phase 2: Brief Project

“Brief” Project

We returned to the stakeholders repeatedly to:

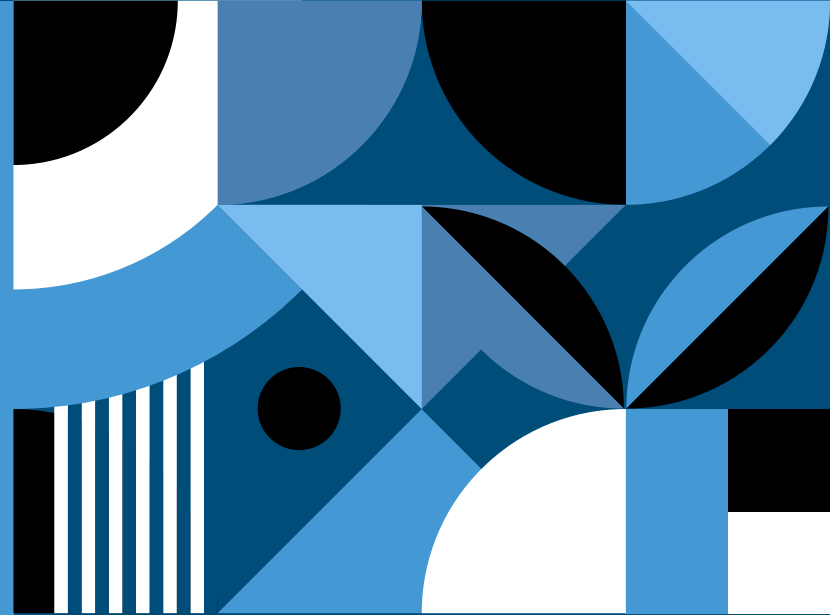
- Ask how it was going
- Determine what else was needed for implementation
- Gain perspectives about the scenarios where they were using the tool



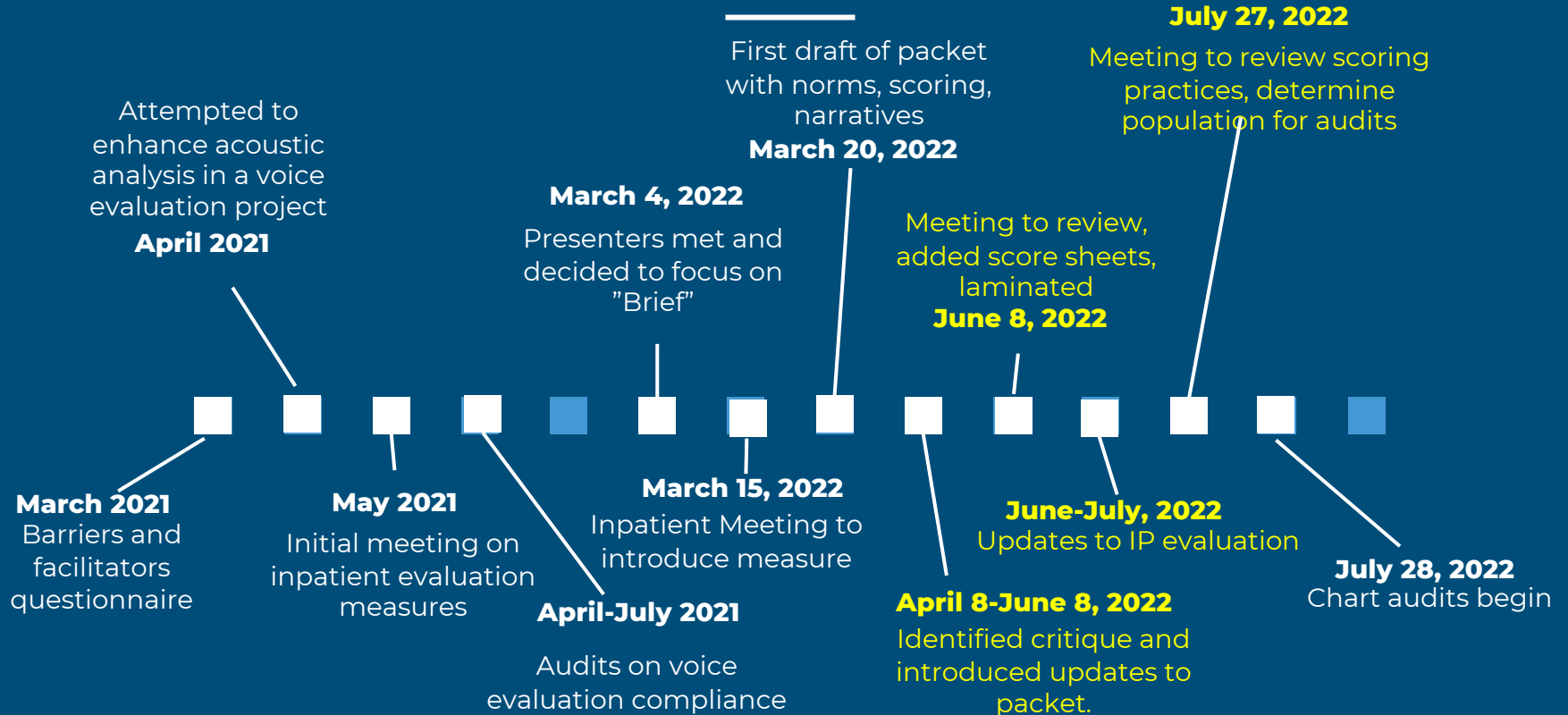
QIF Phase 3: Brief Project

“Brief” Project

- Reviewed scoring systems and provided education regarding normative scores, mean/SD, bell curve
- Identified a specific population to track
- Initiated audits to provide clear feedback to team

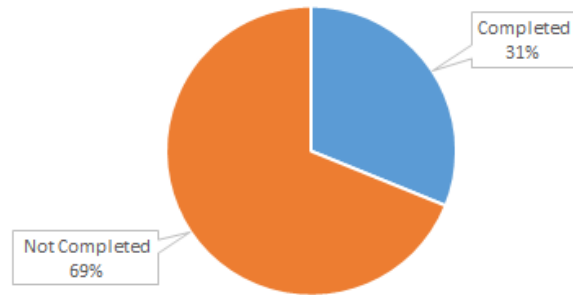


QIF Phase 3: IMPLEMENTATION TIMELINE



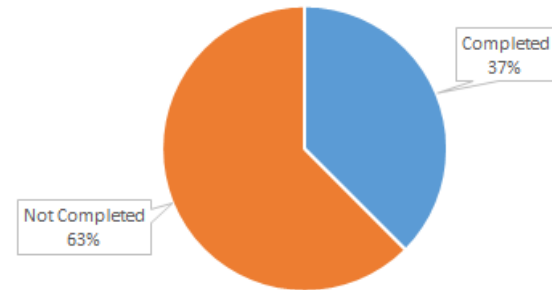
Audit Results for Completing Full “Brief”

Full Brief Evaluation of Executive Dysfunction Completed
for Admissions with Acute CVA Diagnosis



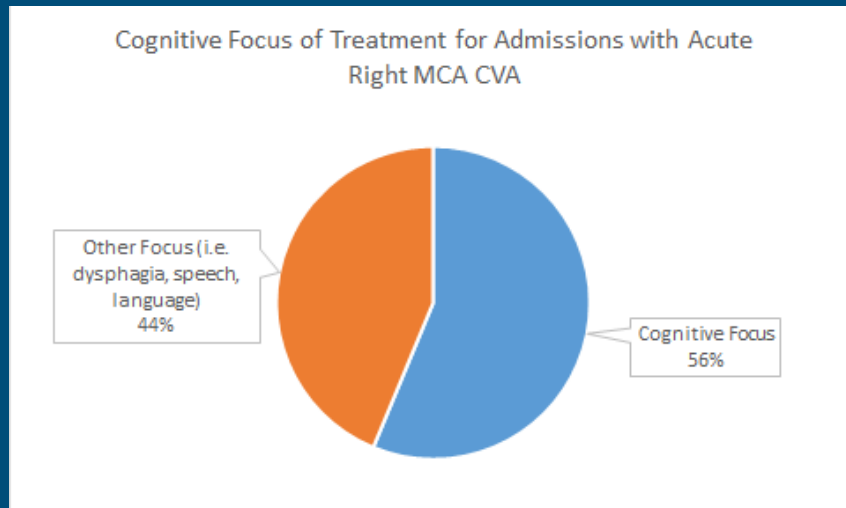
N=61

Full Brief Evaluation of Executive Dysfunction Completed
for Admissions with Acute Right MCA CVA Diagnosis



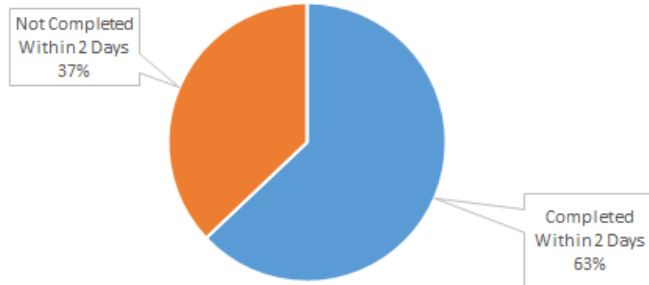
N=14

Audit Results for Selected R MCA CVAs

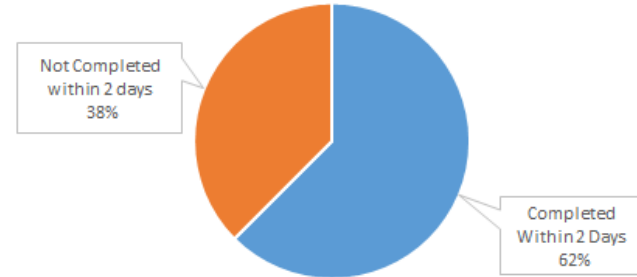


Audit Results for Completing “Brief” in 2 Days

Completed Within 2 Day Timeframe: Admissions with Acute CVA Diagnosis



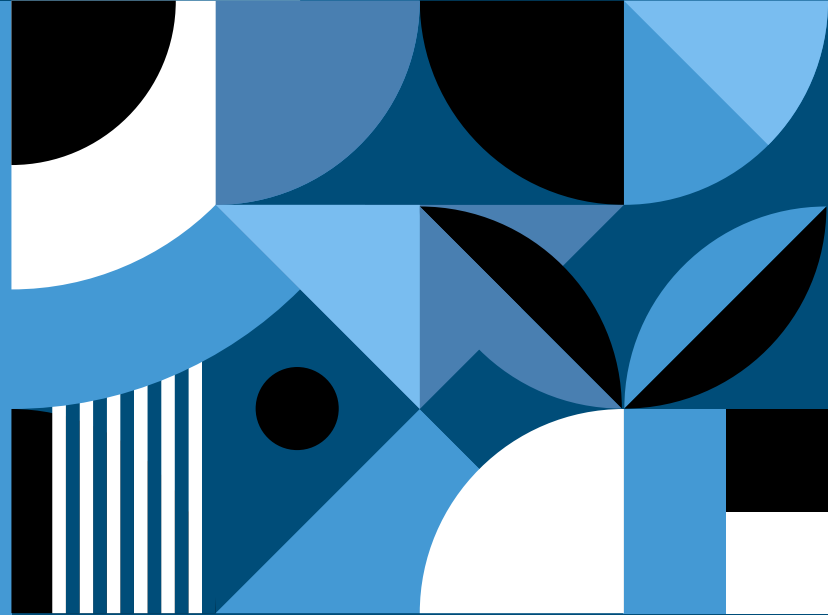
Completed Within 2 Day Timeframe: Admissions with Acute Right MCA CVA Diagnosis



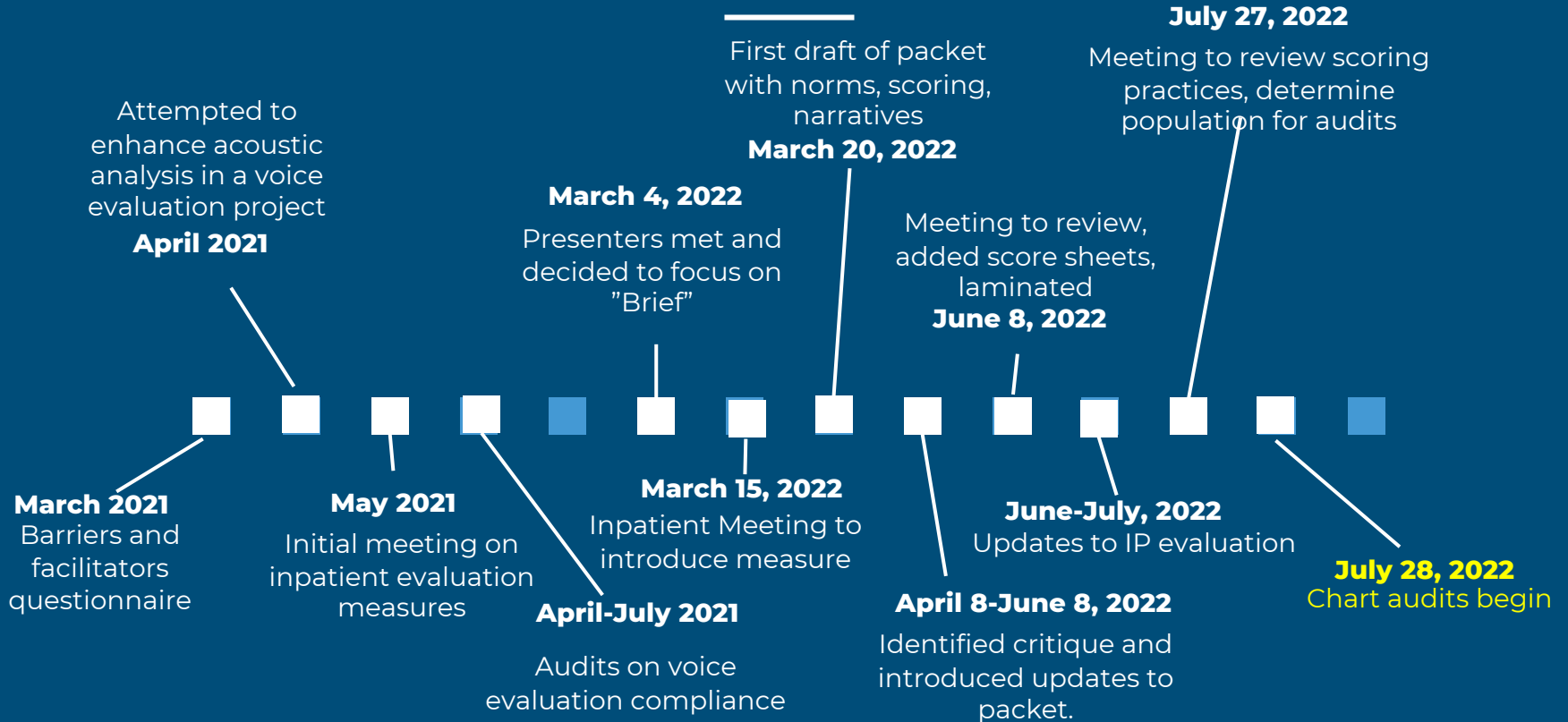
Reflections on Results

Where to go next

- Need to determine ask rationales/why CLOX is not completed
- Need to determine if cognition is a focus why Brief is not completed as an assessment point.



IMPLEMENTATION TIMELINE



FUTURE DIRECTIONS



IP EVALUATION

Continue to add objective evaluation tools



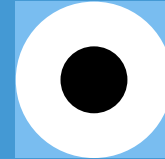
CONNECT

Connect patient outcomes with evaluation.



REFINE

Our processes for implementation and auditing



EBP Treatment

Connect evaluation methods with distinct treatment pathways.



Thoughts and Questions

Let's discuss!

References

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